

12. (Amended) A purified and isolated seven transmembrane receptor polypeptide according to [any one of claims 1-11] claim 8.

A2  
13. (Amended) A purified and isolated polypeptide according to [any one of claims 1-11] claim 8 comprising at least one extracellular domain of the seven transmembrane receptor polypeptide.

14. (Amended) A purified and isolated polypeptide according to [any one of claims 1-11] claim 8 comprising the N-terminal extracellular domain of the seven transmembrane receptor polypeptide.

15. (Amended) A purified and isolated polypeptide according to [any one of claims 1-11] claim 8 comprising a seven transmembrane receptor fragment selected from the group consisting of an N-terminal extracellular domain transmembrane domains, extracellular loops connecting transmembrane domains, intracellular loops connecting transmembrane domains, a C-terminal cytoplasmic domain, and fusions thereof.

16. (Amended) A polypeptide according to [any one of claims 1-15] claim 8, wherein the polypeptide further includes a heterologous tag amino acid sequence.

A3  
18. (Amended) A purified and isolated polynucleotide comprising a nucleotide sequence that encodes a polypeptide according to [any one of claims 2, 3, 4, 8 or 9] claim 8.

19. (Amended) A purified and isolated polynucleotide comprising a heterologous expression control sequence operatively linked to a nucleotide sequence that encodes a polypeptide according to [any one of claims 1-16] claim 8.

A4  
22. (Amended) A purified and isolated polynucleotide comprising a nucleotide sequence that encodes a mammalian seven transmembrane receptor, wherein said polynucleotide hybridizes to [any one of] the nucleotide sequence[s] set forth in SEQ ID NO[S]: [1, 3, 5, 7, 9, 11,] 13, [15, 17, or 19] or the non-coding strand complementary thereto, under the following hybridization conditions:

(a) hybridization for 16 hours at 42°C in a hybridization solution comprising 50% formamide, 1% SDS, 1 M NaCl, 10% dextran sulfate and

(b) washing 2 times for 30 minutes at 60°C in a wash solution comprising 0.1x SSC and 1% SDS, with the proviso that the nucleotide sequence of the polynucleotide differs from the coding sequence set forth in [any one of] SEQ ID NO[S]: [1, 3, 5, 7, 9, 11,] 13, [15, 17, or 19] and from its complementary strand by at least one nucleotide.

A5  
24. (Amended) A vector comprising a polynucleotide according to [any one of] claims 17-23] claim 17.

A6  
26. (Amended) A host cell stably transformed or transfected with a polynucleotide according to [any one of claims 17-23] claim 17 in a manner allowing the expression in said host cell of the polypeptide or fragment thereof encoded by the polynucleotide.

27. (Amended) A host cell stably transformed or transfected with a vector according to claim [24 or] 25 in a manner allowing the expression in said host cell of the polypeptide or fragment thereof encoded by the polynucleotide.

28. (Amended) A method for producing a seven transmembrane receptor polypeptide comprising the steps of growing a host cell according to claim 26 [or 27] in a nutrient medium under conditions in which the host cell expresses a seven transmembrane receptor encoded by the polynucleotide.

A7  
31. (Amended) An antibody specific for a polypeptide according to [any one of claims 1-15] claim 8.

A8  
35. (Amended) An antibody according to claim 31 that specifically binds an extracellular epitope of a seven transmembrane receptor having an amino acid sequence [selected from the group consisting] of SEQ ID NO: 14 [NOS: 2, 4, 6, 8, 10, 12, 14, 16, 18 or 20].

A9  
39. (Amended) A polypeptide comprising a fragment of an antibody according to claim 31, wherein said fragment and said polypeptide specifically bind to a seven transmembrane receptor having an amino acid sequence [selected from the group consisting of SEQ ID NOS: 2, 4, 6, 8, 10, 12, 14, 16, 18 or 20] set forth in SEQ ID NO: 14.

A10  
41. (Amended) A composition comprising a polypeptide according to [any one of claims 1-16] claim 8 in a pharmaceutically acceptable carrier.

42. (Amended) A composition comprising an antibody according to [any one of claims 31, 32, 34, 35, or 36, or a polypeptide according to claim 39 or 40,] claim 31 in a pharmaceutically acceptable carrier.

43. (Amended) A method for modulating ligand binding of a seven transmembrane receptor polypeptide according to [any one of claims 1-15] claim 8, comprising the step of contacting said seven transmembrane receptor polypeptide with an antibody specific for said seven transmembrane receptor, under conditions wherein the antibody binds the receptor.

44. (Amended) A method for modulating ligand binding of a seven transmembrane receptor polypeptide comprising the step of contacting said seven transmembrane receptor polypeptide with a polypeptide according to claim 39 [or 40].

45. (Amended) An assay to identify compounds that bind a seven transmembrane receptor polypeptide, said assay comprising the steps of:

(a) contacting a composition comprising a seven transmembrane receptor polypeptide according to [any of claims 1-15] claim 8 with a compound suspected of binding the seven transmembrane receptor polypeptide; and

(b) measuring binding between the compound and the seven transmembrane receptor polypeptide.

46. (Amended) A method for identifying a modulator of binding between a seven transmembrane receptor polypeptide and a binding partner of the seven transmembrane receptor polypeptide, comprising the steps of:

(a) contacting the binding partner and a composition comprising the seven transmembrane receptor polypeptide in the presence and in the absence of a putative modulator compound, where the seven transmembrane receptor polypeptide is a polypeptide according to [any one of claims 1-15] claim 8;

(b) measuring binding between the binding partner and said seven transmembrane receptor polypeptide; and

(c) identifying a putative modulator compound in view of decreased or increased binding between the binding partner and seven transmembrane receptor polypeptide in the presence of the putative modulator, as compared to binding in the absence of the putative modulator.

47. (Amended) An assay according to claim 45 [or 46] wherein the composition comprises a cell expressing the seven transmembrane receptor polypeptide on its surface.

75. (Amended) An assay according to claim 74 [or 75] wherein the composition comprises a cell expressing the seven transmembrane receptor polypeptide on its surface.